

Title (en)

METHOD FOR LASER WELDING, WELD SEAM AND LASER WELDING DEVICE

Title (de)

VERFAHREN ZUM LASERSTRAHLSCHWEISSEN, SCHWEISSNAHT UND LASERSTRAHLSCHWEISSVORRICHTUNG

Title (fr)

PROCÉDÉ DE SOUDAGE PAR FAISCEAU LASER, CORDON DE SOUDURE ET DISPOSITIF DE SOUDAGE PAR FAISCEAU LASER

Publication

**EP 3429798 A1 20190123 (DE)**

Application

**EP 17701137 A 20170124**

Priority

- DE 102016204556 A 20160318
- EP 2017051376 W 20170124

Abstract (en)

[origin: WO2017157548A1] The invention relates to a method for laser welding a front fillet seam with a reduced end crater, wherein a laser beam is guided to generate the front fillet seam (52) with an advancing movement in a welding direction (X) along a join (40) of two components (20, 30) arranged such that they are partially overlapping, in particular components made of aluminium alloys at risk of hot-cracking, wherein a seam end section (54) is formed adjacent to the front fillet seam (52), from which molten material drains into the region of the front fillet seam (52), wherein upon reaching an end point of the front fillet seam (52) to be formed, the laser beam is adjusted transverse to the advancing movement on the upper surface (20) and the advancing movement of the laser beam is continued in the welding direction over an additional section, while the power (P) of the laser beam is reduced to at least below the deep welding threshold. The invention also relates to a weld seam with a reduced end crater and a laser welding device.

IPC 8 full level

**B23K 26/082** (2014.01); **B23K 26/242** (2014.01); **B23K 26/244** (2014.01); **B23K 26/32** (2014.01); **B23K 101/18** (2006.01); **B23K 103/10** (2006.01)

CPC (source: EP)

**B23K 26/082** (2015.10); **B23K 26/242** (2015.10); **B23K 26/244** (2015.10); **B23K 26/32** (2013.01); **B23K 2101/18** (2018.07); **B23K 2103/10** (2018.07)

Citation (search report)

See references of WO 2017157548A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2017157548 A1 20170921**; DE 102016204556 A1 20170921; EP 3429798 A1 20190123; EP 3429798 B1 20230322

DOCDB simple family (application)

**EP 2017051376 W 20170124**; DE 102016204556 A 20160318; EP 17701137 A 20170124